# Response to the New Zealand Commerce Commission consultation on the financeability of electricity distribution services in the fourth default price-quality path (DPP4)

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Prepared for New Zealand Electricity Distribution Businesses

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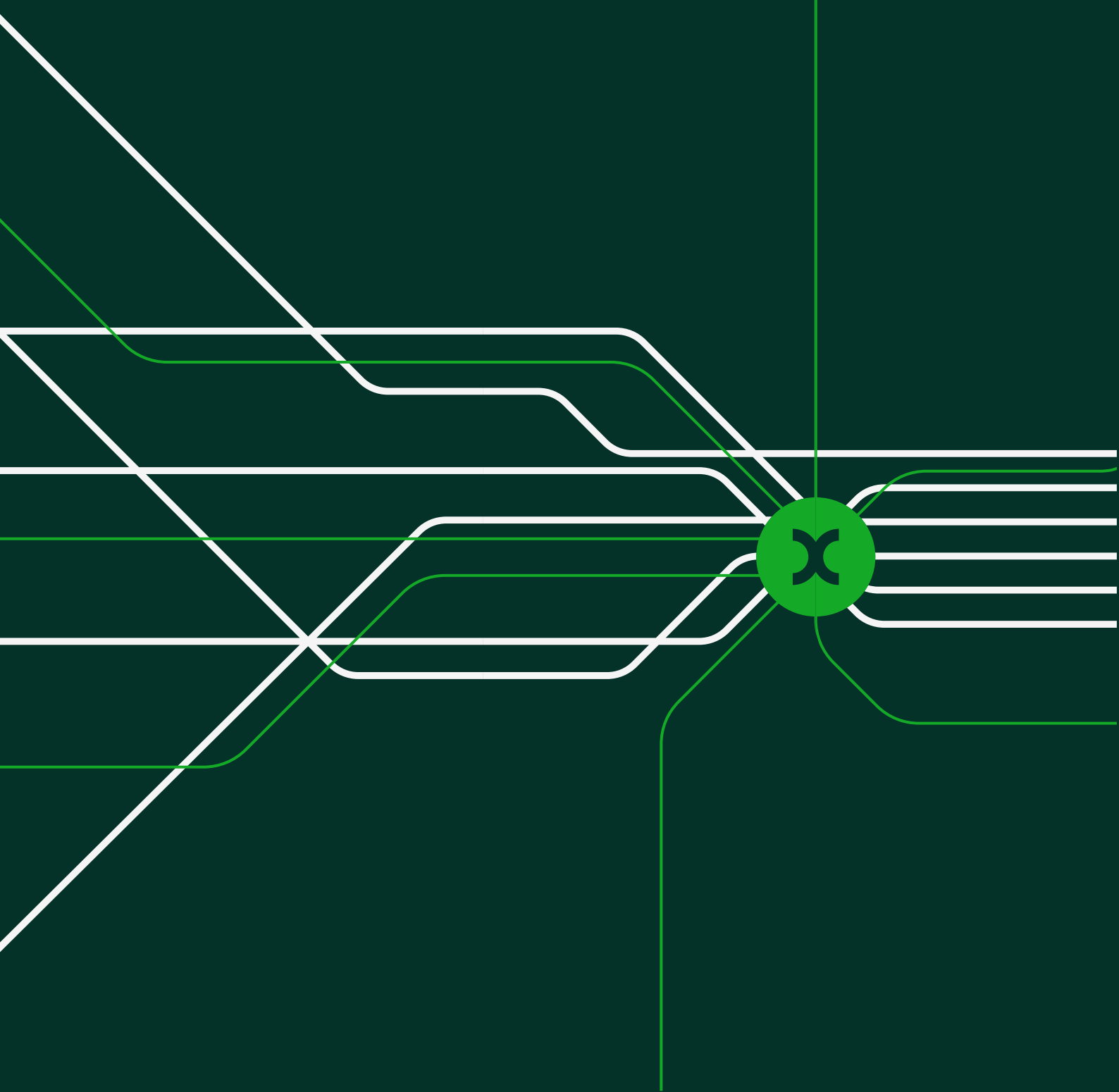

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# Executive summary

The large Electricity Distribution Businesses (EDBs) in New Zealand—together the 'Big Six', which are represented by Aurora, Orion, Powerco, Unison, Vector, and Wellington Electricity—have asked Oxera to assess the consultation on financeability of EDBs in the fourth default price-quality path (DPP4), which the New Zealand Commerce Commission (NZCC) issued on 22 February 2024 (the consultation).[1]

In the consultation, the NZCC outlines the structure of its intended financeability assessment, as summarised below.

1 Assess financeability on a notional basis in the first place, i.e. for 'a prudent and efficient supplier under the proposed price path'.[2]
2 If the NZCC identifies a financeability issue on a notional basis, it will test whether the actual supplier is likely to experience financeability issues in reality.[3]
3 Assuming that on both actual and notional bases, the supplier is expected to experience financeability issues, the NZCC may take this into account in the DPP4 decision-making process.
4 If financeability issues arise due to a high expected level of expenditure, the NZCC considers that the issues are better resolved as part of the customised price-quality path (CPP) application.[4]

In the context of this consultation, and to inform the NZCC's approach, in this report, we have discussed the approach to financeability assessment, and related issues, including the following.

- **Investability**. Investability is a concept complementing financeability with an enhanced emphasis on encompassing equity capital, long-term considerations and networks' attractiveness to new investors.
- **Importance of dividend payments for utilities.** We show that dividend payments are important for utility investors, and that reducing or limiting dividends may disincentivise the commitment of capital.

[1] NZCC (2024), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February.
[2] Ibid., para. X11.
[3] Ibid., para. X11–X12.
[4] Ibid., para. X17.

- **Impact of cash deferrals**. We highlight that cash flow deferrals are used in regulatory practice only in a targeted way, and require a careful assessment of the consequences. Deferrals may also increase the regulatory and interest-rate risk to which investors are exposed. Therefore, it would be consistent with good regulatory practice for the NZCC to avoid deferring cash flows beyond the DPP period of relevance (i.e. DPP4 in this case).
- **Further responses to the consultation**. Finally, we provide a few direct responses to the NZCC's financeability consultation. We cover topics such as the structure of the NZCC's intended financeability assessment, the principles that the NZCC intends to follow, and the regulatory levers that the NZCC considers as potential financeability remedies.

Below, we provide a summary of our findings.

**Investability**

Further to Ofgem's recent consultation in relation to the RIIO-3 network price controls in the UK, we discuss the concept of 'investability', as complementing the 'financeability' test that the NZCC is consulting on.[5] At one level, the concept of investability is not substantively new—as per the NZCC's definition of financeability, investability relates to 'the ability of firms to raise and repay' capital.[6] However, the concept of investability changes the emphasis from credit metrics to a more holistic view of the issue, e.g. encompassing equity capital, long-term considerations and networks' attractiveness to new investors.

We consider the investability considerations to be closely aligned with the Part 4 purpose to incentivise suppliers to innovate and invest, as well as to 'not unduly deter investment' by suppliers. It is also consistent with the NZCC's intention to assess the financeability in relation to both debt and equity capital.

Ofgem highlights the following regulatory tools that it may consider as part of the investability assessment.

- Reflecting forward-looking risks in the cost of equity allowance.

[5] Ofgem (2023), 'RIIO-3 Sector Specific Methodology Consultation – Overview Document', 13 December, para. 2.35, https://www.ofgem.gov.uk/sites/default/files/2023-12/RIIO-3%20SSMC%20Overview%20Document.pdf (last accessed 13 March 2024).
[6] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.4.

- Providing an allowance for the cost of issuing equity capital.
- Making sure that the level of the cost of debt allowance reflects the scale of the required investment, which would need to be financed at the current rates that have recently increased.
- Regulatory depreciation and asset lives policy.

Building on that, we note a few more points in relation to investability.

- Investability should be considered over a long term to reflect investment horizons, while the timing of cash flows also matters to investors. Therefore, short-term cash flow implications should also be assessed.
- There is interdependence between investability and resilience, where the latter refers to both operational and financial resilience.
- Investment intensity across sectors and geographies is significant, and New Zealand energy networks need to compete in domestic and international markets for capital across a range of infrastructure investments.
- There is a range of equity metrics that could be assessed in addition to the credit metrics, including the dividend yield.

**Importance of dividend payments for utilities**

We have considered whether investors can costlessly reduce or limit dividends, as the NZCC appears to suggest, as a preferred way of resolving some financeability concerns.

In this regard, at the outset we note that the Modigliani-Miller dividend irrelevance theorem suggests that investors are indifferent between receiving a dividend as a cash flow or reinvesting it in the business. However, the theorem is based on assumptions, such as no transaction costs and perfect information, that do not necessarily hold in the real world. Therefore, in practice, investors may not be indifferent between receiving a dividend and reinvesting in the company, i.e. they may be affected by the timing of cash flows in relation to firms' dividend distribution policy.

There is also a catering theory that supports that investors in utilities may have a specific preference for stable and high dividends due to institutional, clientele and behavioural explanations. The theory also suggests that a reduction in the dividend yield may cause investors to reduce their holdings in utilities.

Finally, we compare historical dividend yields empirically for broad stock market indices and indices of utility stocks. We find that, across geographies, dividend yields for utilities are generally higher than those for the broader stock market indices. However, allowing for analysis of share buybacks together with dividend yields, we note that the evidence is more mixed across the jurisdictions that we have assessed (i.e. the USA, UK, Australia and New Zealand) whereby utility stocks tend to have higher combined dividend yields and share buyback levels, but not consistently—in particular, this result does not hold in the USA. Nonetheless, for the New Zealand market, we observe that the level of dividend yields with or without share buybacks has been higher for the utilities index than for the broad equity market index over the period 2016–23, consistently.

We therefore conclude that it is important for the NZCC to be mindful of the investor demand for dividend payments, as the lack of these may disincentivise investors to commit capital into utilities, which is particularly required in the EDBs' context of expected growth to deliver the energy transition in New Zealand. As such, the NZCC should include dividend yield testing as part of its financeability test.

**Impact of cash flow deferrals**

In its latest IMs Review Final Decision, the NZCC has stated that it wishes to manage the volatility of allowable revenues and to avoid mid-period price shocks, which may lead the NZCC to deferring cash flows beyond the DPP under consideration.

However, good regulatory practice, as supported by international practice, involves setting a control where the network can price up to the revenue corresponding to the estimates based on the regulatory building blocks and suggests that cash flow deferrals only happen under very specific circumstances. This implies that a reasoned, principles-based, ex ante mechanism to defer revenue recovery would need to be developed and assessed for its impact before any deferral is introduced.

Moreover, the introduction of cash flow deferral introduces or increases at least two types of risks:

- a regulatory risk, as regulators cannot offer binding commitments that their successors will honour in full any pledges that they make today regarding expected future returns;

- a systematic interest rate risk, as the NPV of a longer-duration stream of cash flows is more sensitive to changes in interest rates than that for shorter-duration streams.

Therefore, if such deferrals are introduced, it would be necessary to include allowances for these additional risks in the determination of the allowed revenue.

**Consultation response**

In conclusion, in addition to the points we have made throughout the report, we note the following, directly responsive to the statements the NZCC made in its consultation.

- Estimating an appropriate cost of capital allowance bottom-up may not be sufficient to incentivise investors to invest—a financeability test is required to see if the network is able to raise financing on the terms assumed by the regulator when setting cost of capital allowances. The NZCC generally does acknowledge that the test is needed.
- The financeability test is needed even for networks in the 'steady-state', because even in those cases, the circumstances may be such that financeability issues arise.
- We consider that the NZCC's choice of the BBB+ credit rating as a benchmark is appropriate, as it is consistent with the credit rating the NZCC used for setting its cost of debt allowance.
- We have concerns about the level of detail that has been specified by the NZCC in relation to its planned approach to financeability. This approach creates uncertainty about the robustness of the NZCC's analysis that it will undertake and provides the NZCC flexibility to adjust the analysis to fit the results.
- We also find it essential for the NZCC to work with some thresholds for financeability metrics, which the NZCC currently does not intend to do. Otherwise, it is unclear how the NZCC will interpret the ratios it calculates. We also consider that the thresholds that the NZCC (implicitly) used in DPP3 (i.e. free cash flow of above 0 and the interest coverage ratio of above 1.0x) were too low, with reference to maintaining investment grade credit ratings and equity investability in a sustainable industry.
- We consider that the regulatory allowances need to be workable in terms of financeability on the basis of both notional and actual definitions of the supplier.
- We consider it important for the NZCC to define the notional company and let stakeholders comment on the definition.

- Finally, given the high direct and indirect costs of suppliers leaving the industry, it would be appropriate for the NZCC to try to prevent such instances. Robust testing of financeability on a notional and actual bases to plausible downside scenarios could assist the NZCC.

We have also commented on the regulatory levers that the NZCC considers to have an impact on financeability and intends to use as potential remedies. We note, in particular, that given the role that equity injections could play as part of the financing of the energy transition and the (significant) future investment needs of the EDBs, it is important to specify the direct and indirect costs of equity issuance for which cost allowances should be made, in DPP4 and beyond. Further evidence can be provided in relation to this, based on market evidence and academic research.

# 1 Introduction

The large electricity distribution businesses (EDBs) in New Zealand—together 'Big Six', which are represented by Aurora, Orion, Powerco, Unison, Vector, and Wellington Electricity—have asked Oxera to assess the consultation on financeability of EDBs in the fourth default price-quality path (DPP4), which the New Zealand Commerce Commission (NZCC) issued on 22 February 2024 (the consultation).[7]

The NZCC considered introducing a financeability test as part of the input methodologies (IMs) in its latest IMs Review, but decided against this, saying that the NZCC can already consider, and has previously considered, financeability where relevant.[8] At the same time, the NZCC recognises the role of financeability testing in satisfying the Commerce Act Part 4 requirement (Part 4 regulation) for NZCC to promote the long-term benefit of consumers,[9] and therefore intends to test financeability at the DPP4 reset. Oxera has previously explained why we consider setting financeability testing principles in the IMs to be beneficial.[10]

The NZCC's guiding principle in relation to the financeability of regulated businesses appears to be that 'financing significant new capacity and new investment is the responsibility of the business',[11] including the expected increased EDBs' expenditure to satisfy the decarbonisation-related growth in electricity demand.[12] We agree that financing the (expansion of the) asset base of a network is always the responsibility of suppliers, but we consider that it is also important for the regulator to test the financeability of the DPP package. We note that the NZCC intends to structure its financeability assessment as follows.

[7] NZCC (2024), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February.
[8] NZCC (2023), 'Financing and incentivising efficient expenditure during the energy transition topic paper. Part 4 Input Methodologies Review 2023 – Final decision', 13 December, para. X35, https://comcom.govt.nz/__data/assets/pdf_file/0023/337613/Part-4-IM-Review-2023-Final-decision-Risks-and-Incentives-topic-paper-13-December-2023.pdf (last accessed 12 March 2024).
[9] NZCC (2024), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. X6.
[10] Oxera (2023), 'Response to the New Zealand Commerce Commission's draft decision for Part 4 Input Methodologies Review 2023 on the cost of capital. Prepared for the New Zealand electricity distribution businesses', 19 July, section 8, https://comcom.govt.nz/__data/assets/pdf_file/0016/323107/27Big-627-EDBs-Oxera_-Response-to-Commission27s-draft-decision-for-IM-Review-2023-on-the-cost-of-capital-Submission-on-IM-Review-2023-19-July-2023.pdf (last accessed 12 March 2024).
[11] Ibid. para 1.13.
[12] Ibid., para. X3.

1 Assess financeability on a notional basis in the first place, i.e. for 'a prudent and efficient supplier under the proposed price path'.[13]

2 If the NZCC identifies a financeability issue on the notional basis, it will test whether the actual supplier is likely to experience financeability issues in reality.[14]

3 Assuming that on both actual and notional bases, the supplier is expected to experience financeability issues, the NZCC may take this into account in the DPP4 decision-making process. In particular, the NZCC identified a range of regulatory decisions that are likely to affect financeability, and therefore can either support or damage suppliers. These include setting the X-factors affecting the profile of cash flows during the regulatory period, the secondary revenue smoothing limits, equity issuance cost allowance and others.[15]

4 If financeability issues arise due to high expected levels of expenditure, the NZCC considers that the issues are better resolved as part of the customised price-quality path (CPP) application.[16]

The NZCC does not specify the details of the financeability assessment it intends to follow, although broadly saying that it will check 'metrics and ratios, drawing on the approach of regulators in other jurisdictions, and credit rating agencies when assessing the financial position of businesses'.[17]

In this report, to inform the NZCC's approach, we discuss financeability assessment, and related issues, including:

- the concept of 'investability' which is complementary to the concept of financeability, in section 2;
- the importance of dividend payments for utilities, in section 3;
- the potentially adverse impact of cash flow deferrals beyond the DPP period, in section 4;
- our direct comments on the approach to financeability testing and principles that the NZCC intends to follow, as outlined in its consultation, in section 5.

[13] Ibid., para. X11.
[14] Ibid., para. X11–X12.
[15] Ibid., para. X16 and chapter 4.
[16] Ibid., para. X17.
[17] Ibid., para. 3.8.

In section 6, we conclude.

# 2 Investability

The NZCC considers financeability to be a relevant concept in the context of Section 52A(1) of the Commerce Act Part 4, which, for example, talks about suppliers' (of regulated goods and services) incentives to innovate and invest.[18] In addition to that, we would like to highlight Section 52T(3), which states that the NZCC's IMs 'must not unduly deter investment' by suppliers.[19]

Networks' ability and incentives to invest, discussed in Part 4 regulation, rely on the ability to access capital on reasonable terms. This is related to both equity and debt capital, as acknowledged by the NZCC:[20]

Financeability refers to the ability of firms to raise and repay debt and raise equity in financial markets, readily and on reasonable terms, to fund investment needs.

Indeed, the NZCC highlights the potential need to attract new equity if the network experiences a sustained period of negative cash flows, and the NZCC also notes that issuing new equity is associated with cost.[21] This situation (i.e. of needing to attract new equity capital and incurring the cost of doing so) may arise in cases of significant regulatory asset base (RAB) growth—where capital expenditure exceeds depreciation allowances. This is particularly relevant for EDBs in DPP4, given that, as acknowledged by the NZCC, they expect significant increases in expenditure, including for 'electrification-driven demand growth, network renewal and resilience, and potentially new approaches to meeting and managing this demand'.[22]

We support the NZCC in its consideration that RAB growth can, and is likely to, be financed by both equity and debt capital. We would also like to emphasise that the terms on which networks would raise capital need to be sufficiently attractive to investors. To highlight the importance of the equity side of financeability and the attractiveness of investment opportunities for new equity, we note the concept of

[18] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 2.12.1.
[19] Commerce Amendment Act 2008, Part 4, Section 52T(3).
[20] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.4.
[21] Ibid., para. 3.15.2.
[22] Ibid., para. 1.7.

'investability' recently introduced by Ofgem in GB energy networks regulation.[23]

At one level, the concept of investability is not substantively new, compared with the notion of financeability—it still concerns 'the ability of firms to raise and repay' capital on reasonable terms, as per the NZCC's definition of financeability.[24] However, the concept of investability changes the emphasis from credit metrics to a more holistic view of the issue, e.g. encompassing equity capital, long-term considerations and networks' attractiveness to new investors.

Below, we spell out how the GB regulator, Ofgem, has introduced the notion of investability to date (section 2.1), and build on that with additional considerations that regulators need to bear in mind when assessing investability (section 2.2).

### 2.1 Investability in the GB energy networks regulatory regime

In the context of significant investment and potentially new equity capital required by electricity networks, Ofgem introduced the concept of investability for RIIO-3—the next price control for GB energy networks.[25] Ofgem plans to develop this concept alongside financeability 'to better understand whether the allowed return on equity is sufficient to retain and attract the equity capital that the sector requires'.[26] Examples of the regulatory tools that Ofgem is considering paying particular attention to, in the context of investability, are listed below. In addition, Ofgem is open to developing new instruments in collaboration with the industry.

- The **beta sample**, to ensure that forward-looking risks that the sector may be facing are reflected in the cost of equity allowance.[27]
- The allowance for the **cost of issuing equity capital**.[28]

[23] Ofgem (2023), 'Future Systems and Network Regulation: Framework Decision Overview', 26 October, paras 7.10–7.11, https://www.ofgem.gov.uk/sites/default/files/2023-10/FSNR%20Overview%20Document%20Final.pdf (last accessed 8 March 2024).
[24] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.4.
[25] Ofgem (2023), 'Future Systems and Network Regulation: Framework Decision Overview', 26 October, paras 7.10–7.11, https://www.ofgem.gov.uk/sites/default/files/2023-10/FSNR%20Overview%20Document%20Final.pdf (last accessed 8 March 2024).
[26] Ofgem (2023), 'Consultation – RIIO-3 Sector Specific Methodology Consultation – Finance Annex', 13 December, para. 1.6, https://www.ofgem.gov.uk/sites/default/files/2023-12/RIIO-3%20SSMC%20Finance%20Annex.pdf (last accessed 8 March 2024).
[27] Although Ofgem is referring mainly to reconsidering the sample, we would note in addition that this assessment may need to go beyond considering the sample of comparators to estimate market betas, as they are estimated based on historical data, and therefore may not fully and accurately reflect forward-looking risks.
[28] We consider issues in relation to the cost of issuing equity in section 5.3.5.

- The **cost of debt** allowance, which should account for a sufficient proportion of the new debt (this is because with an increase in interest rates and significant capital requirements due to expected investments, the cost of debt may be reasonably expected to increase).
- **Regulatory depreciation policy**, to ensure it continues to reflect useful economic lives.[29]

In addition, Ofgem is open to developing new instruments in collaboration with the industry.

## 2.2 Additional considerations for investability assessment

We build on Ofgem's considerations below, making the following points.

- Investability should be assessed over a long term to reflect investment horizons, but the timing of cash flows also matters to investors. Therefore, short-term cash flow implications should also be assessed.
- There is interdependence between investability and resilience, where the latter refers to both operational and financial resilience.
- Investment intensity across sectors and geographies is significant, and New Zealand energy networks need to compete in domestic and international markets for capital across a range of infrastructure investments.
- There is a range of equity metrics that could be assessed in addition to the credit ones.

We explain each of them in turn below.

### 2.2.1 The timing of cash flows and timeframe of the assessment

Investability is inherently a longer-term construct than the five-year regulatory period—not least because investors committing equity have a longer time horizon than five years.

This is consistent with the NZCC's view:[30]

[…] we remain of the view that investment in regulated infrastructure involves 'patient capital' and attracts investors that have long horizons for recouping their investment […]

[29] It is possible that Ofgem referred to this in the context of the gas sector, as it is setting the RIIO-3 controls for electricity and gas concurrently.
[30] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.8.

Accordingly, it is our view that in taking account of the financeability and the investability of the sector, a long-term view is indeed required[31]—equity and debt capital needs to be incentivised for entry and retention, with reference to the opportunity cost of the capital. Investors form views about capital decisions with reference to the lifetime of an investment, and the lifetime of the assets—not just the risk and returns that are on offer within the five-year regulatory period.

At the same time, investors are not indifferent to the timing of cash flows. This is particularly the case if there is any perception that investment risk may be affected by the timing of cash flows. Investors may also have choices about how and where they (re)allocate capital to achieve their desired timings of cash flows, and they may choose to reallocate their capital to assets other than EBDs in New Zealand. Specifically, in sections 3 and 4, we discuss that the timing of cash flows matters to investors, and therefore regulators need to account for the ability of networks to pay a sufficient level of dividends and avoid cash flow deferrals beyond the regulatory period, while maintaining a strong credit rating.

### 2.2.2 The interdependence between investability and resilience

There is a role for the regulatory controls in incentivising the networks to maintain financial and operational resilience, which serves the long-term consumer interest in line with the Part 4 purpose. This means that investability and resilience will tend to be interdependent regulatory considerations.

Specifically, unless the tools of investability incentivise enough capital to enter and stay, the financial and operational resilience of the sector could be undermined—especially if the NZCC cannot rely to the same extent on licence requirements as some of its international regulator peers can. We understand from discussion with the Big Six that EDBs in New Zealand do not have some of the conditions and protections that can be specified in the suppliers' licences, or as part of the regulatory environment, which could otherwise support operational and financial resilience. Examples include a Special Administration regime, as a means of ensuring continuity of service, and investment grade credit licence

[31] In the SSMC, Ofgem considers assessing financeability over a long period beyond the immediate regulatory period. See Ofgem (2023), 'Consultation – RIIO-3 Sector Specific Methodology Consultation – Finance Annex', 13 December, para. 5.14, https://www.ofgem.gov.uk/sites/default/files/2023-12/RIIO-3%20SSMC%20Finance%20Annex.pdf (last accessed 8 March 2024).

obligations on suppliers, to protect consumers from the deterioration of their financial condition.

Accordingly, the tools of investability and financeability—e.g. adequate dividend yields in line with investor expectations, and adequate credit metrics in line with investment grade credit ratings—need to be given due regard within the calibration of the DPP for a notionally efficient operator. By allowing sufficient weight to the timing of cash flows, it is possible to reduce or avoid perverse investment incentives (e.g. around the exit of capital or asset sweating). Such perverse incentives would not serve the interests of long-term resilience, sustainability and thereby consumer interest in this sector.

### 2.2.3 Investment intensity across multiple sectors and geographies

The need to attract and/or retain capital is a common requirement across multiple sectors and jurisdictions as countries approach net zero target milestones—and the amounts of capital to be attracted in large-scale infrastructure projects and the energy transition are significant. This need has at least two practical implications.

- First, New Zealand EDBs need to be competitive in their requirements for capital in terms of both the overall expected return and the cash flow profile. EDBs do use international capital—for example, CK Infrastructure Holdings Limited (CKI) is a shareholder of Wellington Electricity.[32] CKI has investments and operations in Hong Kong, Mainland China, the UK, Continental Europe, Australia, New Zealand, Canada and the USA.[33]
- Second, the NZCC may need to be mindful of the identity of the marginal investor and the (higher) level of returns that they require as capital needs to scale up across utility sectors and geographies, which tend to face a common pool of investors.

### 2.2.4 Equity metrics and equity financeability assessed within UK regulatory regimes

To assess the 'ability of firms to raise' equity capital in addition to raising and repaying debt capital,[34] the NZCC would need to

[32] Wellington Electricity, 'Our history and ownership', https://www.welectricity.co.nz/about-us/history-and-ownership/ (last accessed 12 March 2024).
[33] CKI, 'CKI At A Glance', https://www.cki.com.hk/english/about_CKI/cki_at_a_glance/index.htm (last accessed 12 March 2024).
[34] Ibid., para. 1.4.

complement credit metrics with equity metrics. The NZCC's intention is to:[35]

[…] include financeability metrics and ratios, drawing on the approach of regulators in other jurisdictions, and credit rating agencies […]

For credit metrics, the NZCC can follow credit rating agencies' methodologies. We specified the ratios that Moody's uses in our previous submission to provide an example.[36] However, credit rating agencies are less interested in equity capital, therefore, to assist the NZCC with a list of potential equity metrics, we outline a range of precedents where regulators in the UK have assessed equity metrics in Box 2.1 below.

[35] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 3.8.
[36] Oxera (2023), 'Review of the NZCC's approach to the financeability assessment', 15 September, p. 12.

### Box 2.1 Equity metrics and equity financeability assessments considered within the UK regulatory regimes

- In its latest (completed) PR19 price control review, the water networks regulator in England and Wales, Ofwat, considered several equity metrics within its financial models, namely, Dividend Cover ratio, Return on Regulated Equity (RoRE) and Regulatory Capital Value/EBITDA.[1]
- In PR19 redetermination by the UK Competition and Markets Authority (CMA), among other metrics, the CMA assessed Dividend Cover ratio.
- In its PR24 Final Methodology, Ofwat considered RoRE and dividend yield in its assessment of financial metrics.
- For the previous regulatory period, RIIO-1, Ofgem included two equity ratios in its financeability assessment: Regulated equity/EBITDA and Regulated equity/Regulated earnings'.
- For the ongoing regulatory period, RIIO-2, Ofgem considered a suite of equity metrics in the business plan analysis and financeability assessment, including RoRE, Dividend yield, Regulated equity/EBITDA, Regulated equity/profits after tax, EBITDA/Regulated asset value.

Note: [1] EBITDA stands for earnings before interest, tax, depreciation and amortisation.
Source: Ofwat (2019), 'Final Determination models. Financial models', https://www.ofwat.gov.uk/final-determinations-models (last accessed 6 March 2024). Competition and Markets Authority (2021), 'Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations', 17 March, p. 1128, https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_---_web_version_-_CMA.pdf (last accessed 6 March 2024). Ofwat (2022), ' PR24 Final Methodology. Appendix 10—Aligning risk and return', December, p. 46. Ofgem (2012), 'RIIO-GD1: Final Proposals - Finance and uncertainty supporting document' 17 December, p. 27, https://www.ofgem.gov.uk/sites/default/files/docs/2012/12/3_riiogd1_fp_finance_and_uncertainty_0.pdf (last accessed 6 March 2024).
Ofgem (2020), 'RIIO-2 Draft Determinations—Finance Annex', 9 July, p. 96, https://www.ofgem.gov.uk/sites/default/files/docs/2020/07/draft_determinations_-_finance.pdf (last accessed 6 March 2024).

## 2.3 Investability conclusions

In this section, with reference to Ofgem's recent consultation in relation to the RIIO-3 network price controls in the UK, we discuss the concept of 'investability', as complementing the 'financeability' test that the NZCC is consulting on. At one level, the concept of investability is not substantively new—as per the NZCC's definition of financeability, investability relates to 'the ability of firms to raise and repay' capital.[37] However, the concept of investability changes the emphasis from credit metrics to a more holistic view of the issue, e.g. encompassing equity capital, long-term considerations and networks' attractiveness to new investors.

We consider the investability considerations to be closely aligned with the Part 4 purpose to incentivise suppliers to innovate and invest, as well as 'not unduly deter investment' by suppliers. It is also consistent with the NZCC's intention to assess the financeability in relation to both debt and equity capital.

Ofgem highlights the following regulatory tools that it may consider as part of the investability assessment.

- Reflecting forward-looking risks in the cost of equity allowance.
- Providing an allowance for the cost of issuing equity capital.
- Making sure that the level of the cost of debt allowance reflects the scale of the required investment, which would need to be financed at the current rates that have recently increased.
- Regulatory depreciation and asset lives policy.

Building on that, we note a few more points in relation to investability.

- Investability should be considered over a long term to reflect investment horizons, but the timing of cash flows also matters to investors. Therefore, short-term cash flow implications should also be assessed.
- There is interdependence between investability and resilience, where the latter refers to both operational and financial resilience.
- Investment intensity across sectors and geographies is significant, and New Zealand energy networks need to compete in domestic and international markets for capital across a range of infrastructure investments.

[37] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.4.

- There is a range of equity metrics that could be assessed in addition to the credit metrics, including the dividend yield.

# 3 Importance of dividend payments for utilities

In its consultation, the NZCC appears to give low importance to the adequacy of dividends within revenue recovery allowances, and suggests that another owner could enter and provide the service instead if the current provider is not satisfied with the level of dividends. The NZCC states:[38]

For example, if a supplier's owner was unwilling to accept lower dividends in the short term or to raise and/or restructure its debt or equity, then the owner would have to contemplate allowing another owner to enter and provide the service.

However, the NZCC does not appear to give weight to the fact that reducing or limiting dividends is not costless for EDBs. As detailed in this section, research suggests that investors are likely to invest in utilities with an expectation of consistent, steady and relatively high dividend yields. Diverging from such dividend yield policies would thus be unusual and is likely to have an impact on the EDBs' investors. Even if a new owner was to enter, as the NZCC alludes to, there is no expectation that a new pool of investors, if any, would have different behaviours in terms of their dividend expectations. This is because investors allocate their investments into different assets depending on the profile of cash flows they expect to generate from said assets. In other words, investors that invest in utilities are likely to do so with the expectation of consistent and relatively high dividend yields from regulated utilities.

Accordingly, in this section, we present both theoretical and empirical evidence to explain why the regulator should have regard to allowing for a sufficiency of dividend distributions, within its revenue recovery arrangements, for the EDBs. We first start by explaining how the Modigliani-Miller (MM) dividend irrelevance theory does not strictly hold in practice, which implies that investors are not indifferent about dividend distribution policy or the timing of cash flows from dividend payments (section 3.1.1).[39] We then discuss the catering theory of dividend policy, which suggests that a reduction in the dividend yield may cause investors in utilities to reduce their holdings in regulated

[38] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 2.10.
[39] In section 4 of this report, we also explain how delaying cash flows as a result of regulatory choices is likely to entail costs for investors.

utilities (section 3.1.2). We finally present empirical evidence which shows that regulated utilities' dividend yields are generally higher than the broad equity market indices in the same country, across a number of geographies (section 3.2). Section 3.3 concludes.

## 3.1 Theoretical evidence

### 3.1.1 Modigliani-Miller dividend irrelevance theorem

The MM dividend irrelevance theorem posits that investors are indifferent between receiving dividend payouts and realising capital gains by selling their shares.[40] If a company chooses to reinvest profits in financing growth instead of distributing dividends, the price of shares will increase proportionally. Shareholders can then have the option of selling their shares at a higher value than their initial purchase, giving them an 'artificial dividend' which will be the same as a traditional dividend payout. Therefore, a company's value is primarily determined by the present value of its cash flows, driven by strategic investment decisions, rather than the specific manner in which it allocates its earnings.

The MM theorem is built upon the premise of a 'perfect capital market' that satisfies the following assumptions:

- the firm's investment policy is fixed and known by investors;
- individuals can costlessly buy and sell securities;
- there are no personal or corporate income taxes;
- no asymmetries of information—there is perfect sharing of knowledge of current operations and financial performance and future plans between the managers of the firm and its investors;
- there are no agency costs between managers and outside investors—there are no internal costs that arise as a result of competing interests of external shareholders (principals) and internal management (agents).

However, as shown by multiple studies, the 'perfect capital market' is a controlled scenario which cannot be replicated in practical settings and is not seen anywhere in the world.[41]

[40] Miller, M. H., & Modigliani, F. (1961), 'Dividend policy, growth, and the valuation of shares', *The Journal of Business*, October, 34(4), p. 412, https://fdjpkc.fudan.edu.cn/_upload/article/files/2a/ed/7d258c20422c954d81d338c27cb6/f55f1122-a747-49ed-9c41-b6d5ebf95700.pdf (last accessed on 12 March 2024).

[41] See, for example, Ahmeti, F., & Prenaj, B. (2015), 'A critical review of Modigliani and Miller's theorem of capital structure', *International Journal of Economics, Commerce and Management (IJECM)*, 3(6), p. 9, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2623543 (last accessed 7 March 2024).

Specifically, in the context of the EDBs in New Zealand, some examples of how the MM assumptions for dividend irrelevance do not hold, are discussed below.

- New Zealand is currently formalising its Energy Strategy and the Gas Transition Plan, and it is anticipated that there will be higher demand for electrification, as well as expanded and more renewable electricity networks in the coming years.[42] In the face of this, there is likely to be considerable uncertainty about the investment plans of electricity companies, and how and when they will affect its cash flows. This not only violates the assumption of investors having full knowledge about a firm's investment policy, but may also result in significant asymmetries of information between management and investors.
- Of the EDBs, only Vector is publicly listed. Even for publicly listed companies, there are limits to being able to costlessly create 'artificial dividend' income streams, not least because there are transaction costs in buying and selling securities.[43] It is reasonable to expect that there would be further challenges in (costlessly) creating artificial dividend income streams for EDBs that are privately held, since there would be no traded shares with an observed unit price. In attempting to replicate a dividend income stream—were dividends not paid—a unit (i.e. how much of a stake is divested) and its price would have to be determined in a bilateral transaction, and (significant) transaction costs would be incurred in selling a stake.

In practice, there is significant divergence between the 'perfect capital market conditions' that underpin the MM theorem and the actual conditions that are seen in capital markets. Therefore, in practice, investors may not be indifferent between receiving a dividend and reinvesting in the company, i.e. they may be affected by the timing of cash flows in relation to firms' dividend distribution policy.

Furthermore, the notion that investors are indifferent to a deferral in current dividends (because they can create an artificial dividend by

[42] Ministry of Business, Innovation & Employment (2023), 'New Zealand Energy Strategy', 20 November, https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/new-zealand-energy-strategy/; Ministry of Business, Innovation & Employment (2023), 'Gas Transition Plan', 10 November, https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/gas-transition-plan/ (last accessed 7 March 2024).
[43] See, for example, Damodaran, A. (2005), 'Marketability and value: Measuring the illiquidity discount', July, p. 17, SSRN 841484, https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/liquidity.pdf (last accessed on 14 March 2024).

selling the appreciated shares) relies on the assumption that the EDBs would be able to yield higher cash flows in the long term from reinvesting the omitted dividends. In practice, this assumption may be subject to some degree of uncertainty due to regulatory risks, as discussed in section 4.2.

### 3.1.2 Catering theory of dividend policy

The observation that utilities pay higher dividends and have more consistent dividend distributions over time compared with the market as a whole has been the subject of significant research. The academic and empirical research suggests that a large subset of investors are likely to invest in utilities with an expectation of consistent and relatively high dividend yield policies. For example, Armitage (2012) finds that the persistently high dividends in the UK water sector cannot be explained by leading explanations for high dividends, such as taxes, agency costs, signalling, or life-cycle considerations.[44] Rather, Armitage finds that there is an investor demand for dividends due to institutional, clientele and behavioural explanations, with utility companies satisfying such requirements given the nature of the cash flows they generate for their investors.[45] For example, some institutional investors, such as endowments, may require steady cash flows, while others, such as pension funds, may require assets where the cash-flow duration matches that of their liabilities (which in turn are formed by regular payments in the short term, therefore matching the dividends in duration).

The catering theory suggests that a reduction in the dividend yield may cause these investors to reduce their holdings in utilities.[46] The pool of equity capital available to fund utility networks may be more limited if dividends are paid later (i.e. are lower in the current period) than what those investors are used to, consistent with the catering theory. The cessation or long-term delays in dividend payments could therefore lead to changes in the relative attractiveness of investment in EDBs.

[44] For example, agency costs consist of the incremental costs and inherent conflicts of having managers make decisions for investors, as a decision to retain earnings instead of paying dividends would result in managers gaining control over these earnings. Agency theory assumes that large scale retention of earnings encourages behaviour by managers that may not maximise shareholder value. Dividends then can be a valuable financial tool for these firms because they help avoid capital structures that give managers wide discretion to make value reducing investments. See, for example, DeAngelo, H., DeAngelo, L. and Stulz, R. M. (2004), 'Dividend policy, agency costs and earned equity', National Bureau of Economic Research Working Paper 10599.
[45] Armitage, S. (2012), 'Demand for dividends: the case of UK water companies', *Journal of Business Finance & Accounting*, **39**:3–4, pp. 464–499.
[46] Ibid., section 3.7.

### 3.2 Empirical evidence

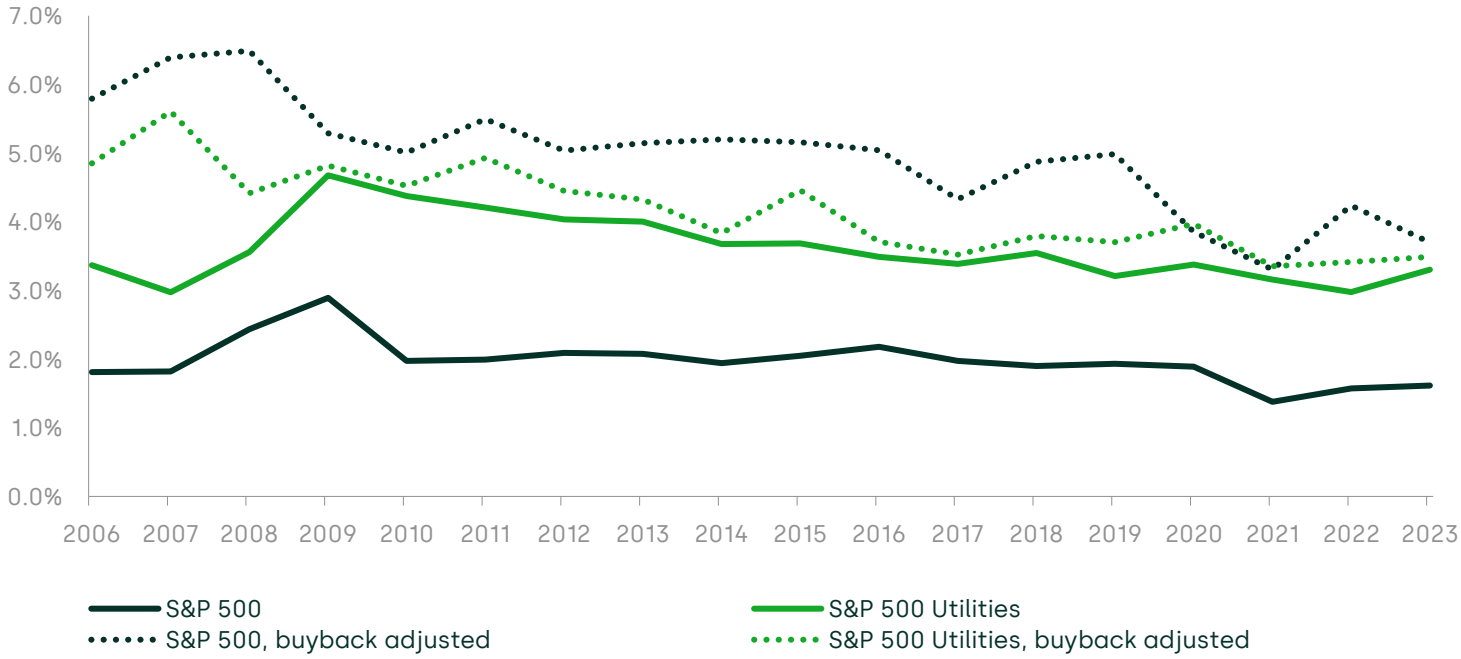
There are factors that suggest that utilities should maintain a high level of dividend payments, in line with a catering theory of dividend policy as discussed above. In brief, this is because the investor base for utility companies is likely to be different to the wider stock market, as utility investors are relatively likely to be income-seeking (i.e. seeking stable dividends).

Historically, dividend yields for the US, UK, Australian and New Zealand utilities have been higher than the market average in those same corresponding geographies. As illustrated in the figures below, we have compared the level of dividend yields between stock indices covering utilities and broader equity market indices covering the wider economy. The results show that dividend yields for utilities are generally higher than those for other companies, even though once we adjust the dividend yields for share buybacks, the evidence is more mixed, as can be seen in the charts below.

The index pairs used for the comparison are as follows:

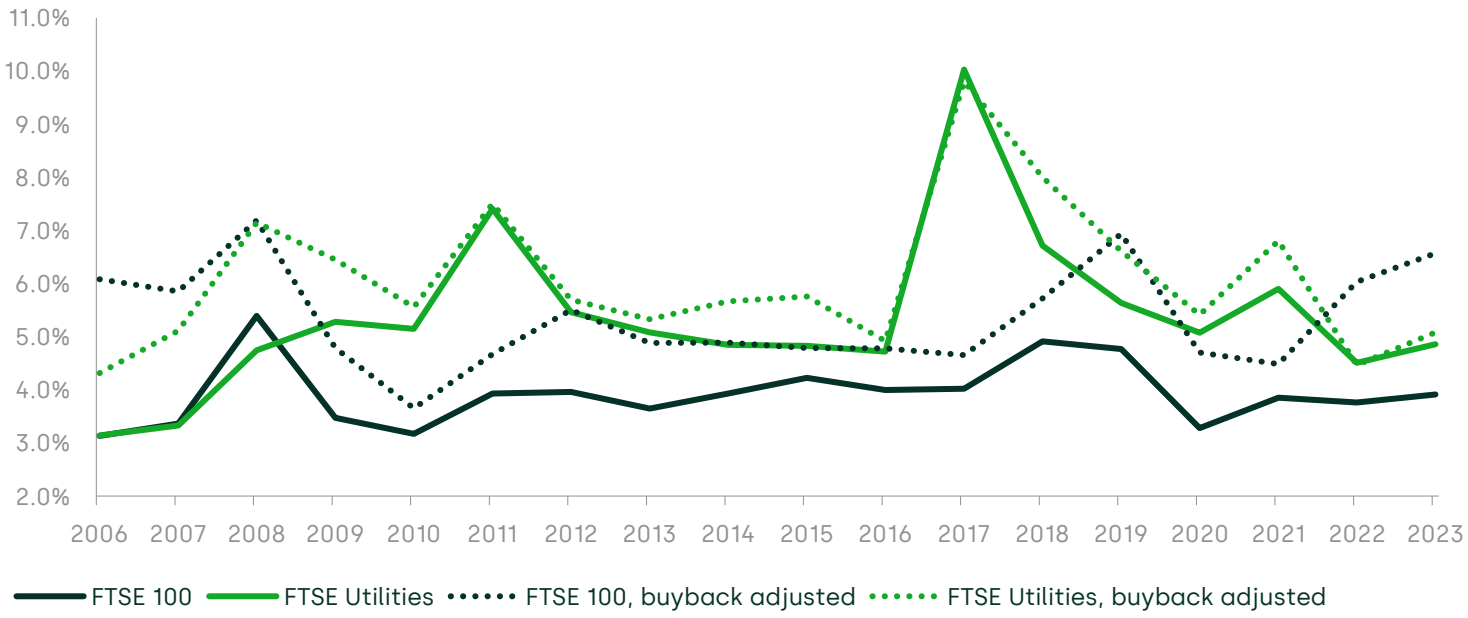
- S&P 500 vs S&P 500 Utilities for the USA (Figure 3.1);
- FTSE 100 vs FTSE Utilities for the UK (Figure 3.2);
- S&P/ASX 200 vs S&P/ASX 200 Utilities for Australia (Figure 3.3);
- S&P/NZX 50 vs S&P/NZX All Utilities for New Zealand (Figure 3.4).

Figure 3.1 Dividend yields for S&P 500 relative to S&P 500 Utilities, USA (%)



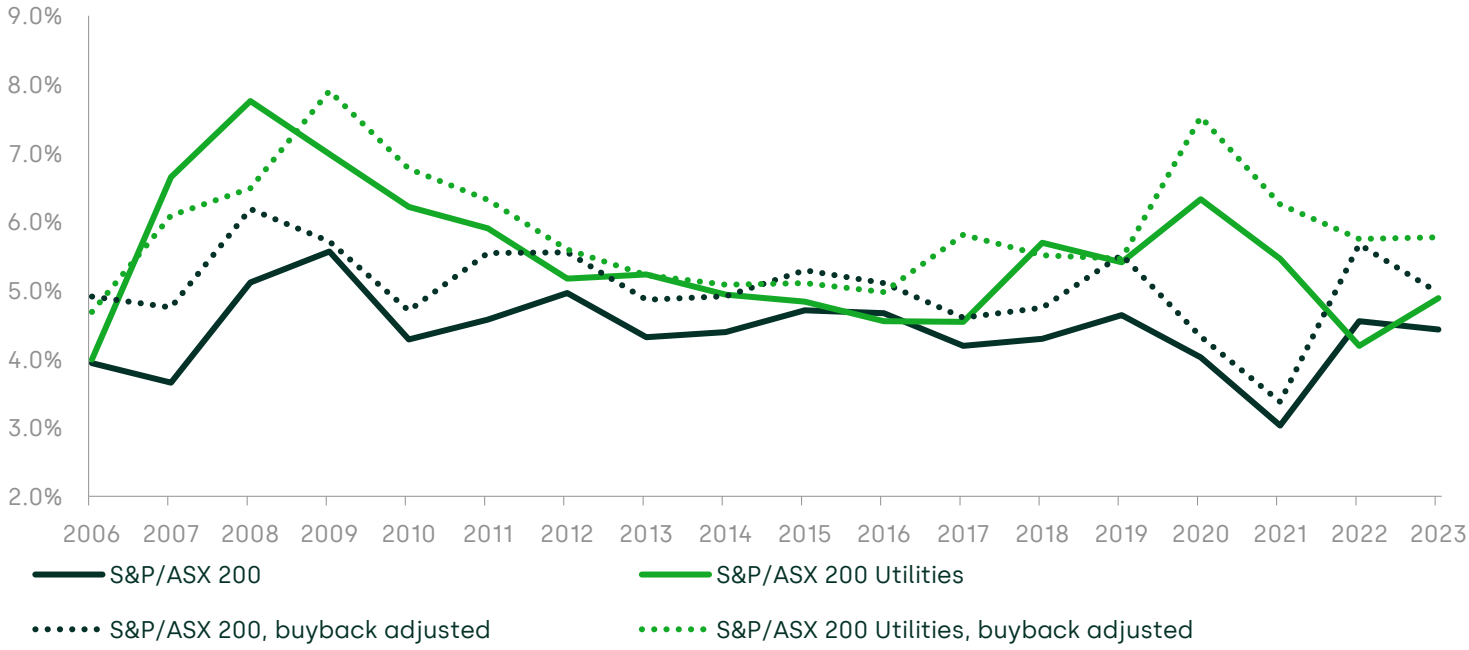

Note: Gross annual dividend yield is computed as the total gross dividend per share over the prior 12 months divided by the in-year share price. The gross dividend amount includes taxes, any related dividend fees or tax-related credits. Buyback adjusted dividend yield is computed as the total gross dividend per share over the prior 12 months, plus buybacks of common stock, common stock warrants, other common stock equivalents, redemption of preferred share capital and purchases of treasury stock over the same period—all divided by the in-year share price.
There are 30 companies in the S&P 500 Utilities index as of March 2024.
Source: Oxera analysis using Bloomberg data.

Figure 3.2 Dividend yields for FTSE 100 relative to FTSE Utilities, UK (%)



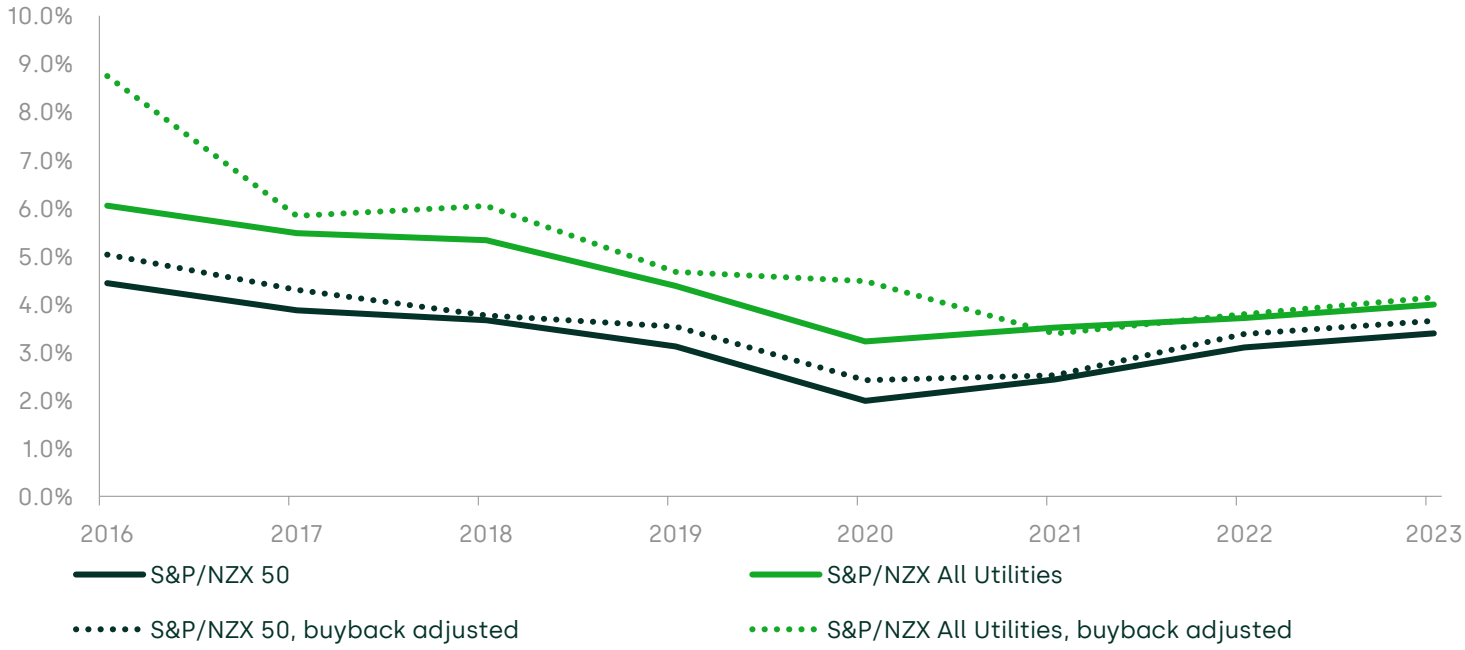

Note: Gross annual dividend yield is computed as the total gross dividend per share over the prior 12 months divided by the in-year share price. The gross dividend amount includes taxes, any related dividend fees or tax-related credits. Buyback adjusted dividend yield is computed as the total gross dividend per share over the prior 12 months, plus buybacks of common stock, common stock warrants, other common stock equivalents, redemption of preferred share capital and purchases of treasury stock over the same period—all divided by the in-year share price.
FTSE Utilities comprises the following utility companies: National Grid Plc, SSE Plc, Centrica Plc, United Utilities Group Plc, Severn Trent Plc, Drax Group Plc, Pennon Group Plc and Renewi Plc.
The spike in the FTSE Utilities index dividend yield observed in 2017 is most likely caused by National Grid Plc paying a special dividend in that year. In 2017, National Grid plc constituted over 45% of the index.
Source: Oxera analysis using Bloomberg data; and National Grid (2017), 'Notice of General Meeting', April, https://www.nationalgrid.com/document/137996/download#:~:text=We%20announced%20today%2C%2019%20April,members%20at%206pm%20(BST)%20on (last accessed 11 March 2024).

Figure 3.3 Dividend yields for S&P/ASX 200 relative to S&P/ASX 200 Utilities, Australia (%)




Note: Gross annual dividend yield is computed as the total gross dividend per share over the prior 12 months divided by the in-year share price. The gross dividend amount includes taxes, any related dividend fees or tax-related credits. Buyback adjusted dividend yield is computed as the total gross dividend per share over the prior 12 months, plus buybacks of common stock, common stock warrants, other common stock equivalents, redemption of preferred share capital and purchases of treasury stock over the same period—all divided by the in-year share price.
The S&P/ASX 200 Utilities index has only three constituents as of March 2024, which are APA Group, Origin Energy Ltd and AGL Energy limited. Moreover, Bloomberg's raw data was showing an implausible outlier for the year 2009, i.e. the dividend yield was reported as over 873% for 2009, such that it is likely to be related to a company-specific issue within the small sample or a data reporting issue. As a result, data for 2009 has been estimated by averaging the dividend yields for 2008 and 2010.
Source: Oxera analysis using Bloomberg data.

Figure 3.4 Dividend yields for S&P NZX 50 relative to S&P NZX All Utilities, New Zealand (%)




Note: Gross annual dividend yield is computed as the total gross dividend per share over the prior 12 months divided by the in-year share price. The gross dividend amount includes taxes, any related dividend fees or tax-related credits. Buyback adjusted dividend yield is computed as the total gross dividend per share over the prior 12 months, plus buybacks of common stock, common stock warrants, other common stock equivalents, redemption of preferred share capital and purchases of treasury stock over the same period—all divided by the in-year share price.
The S&P/NZX All Utilities Index has seven constituents as of March 2024. These are NZ Windfarms Ltd, Vector Ltd, Contact Energy Ltd, Genesis Energy Ltd, Manawa Energy Ltd, Mercury NZ Ltd and Meridian Energy Ltd.
The analysis starts in 2016, as the S&P/NZX All Utilities index was launched in 2015.
Source: Oxera analysis using Bloomberg data.

The above charts demonstrate that utilities' dividend yields have been generally higher, when compared with a broad equity market index, across the geographies that we have analysed. Once we adjust the dividend yields for share buybacks, however, the results are more mixed. For the USA, we see reversal, whereby the adjusted dividend yields for the broader economy index are generally higher than the corresponding adjusted dividend yields for the utilities throughout the period of our analysis. However, this reversal may be driven by high share buybacks of a small number of fintech companies.[47] Across all the other geographies

[47] According to a press release by Janus Henderson Investors, analysing dividends and buyback trends over the past years has shown that the use of share buybacks has been growing rapidly,

analysed, the adjusted dividend yields for utilities have been generally higher, relative to those for the respective broad equity market indices.

It is notable that for the most relevant market in this analysis (i.e. New Zealand) there is a consistently higher level of dividend yields for utilities, including after adjusting for buybacks since the launch of the utilities index in 2016.

### 3.3 Conclusions on the importance of dividend payments for utilities

In this section, we have considered whether investors can costlessly reduce or limit dividends, as the NZCC appears to suggest, as a preferred way of resolving some financeability concerns.

In this regard, at the outset we note that the MM dividend irrelevance theorem suggests that investors are indifferent between receiving a dividend as a cash flow or reinvesting it in the business. However, the theorem is based on assumptions, such as no transaction costs and perfect information, that do not necessarily hold in the real world. Therefore, in practice, investors may not be indifferent between receiving a dividend and reinvesting in the company, i.e. they may be affected by the timing of cash flows in relation to firms' dividend distribution policy.

There is also a catering theory that supports that investors in utilities may have a specific preference for stable and high dividends due to institutional, clientele and behavioural explanations. The theory also suggests that a reduction in the dividend yield may cause investors to reduce their holdings in utilities.

Finally, we compare historical dividend yields empirically for broad stock market indices and indices of utility stocks. We find that, across geographies, dividend yields for utilities are generally higher than those for the broader stock market indices. However, allowing for analysis of share buybacks together with dividend yields, we note that the evidence is more mixed across the jurisdictions that we have assessed (i.e. the USA, UK, Australia and New Zealand). Utility stocks tend to have higher

with the USA being the leading geography. The authors mention that share buybacks have almost tripled in value in the ten years over 2012 to 2022. Just ten companies, out of which nine are in the USA, accounted for almost a quarter of 2022's global share buybacks. Apple, a key constituent of S&P 500, bought back $89bn worth of shares in 2022, almost 7% of the global total. This could be one of the drivers in explaining why the adjusted dividend yields including buybacks are generally higher for the S&P 500 index compared with the adjusted dividend yields for the S&P 500 Utilities index. See James Henderson Investors, 'Global share buybacks surge to a record $1.31 trillion almost equalling dividends', press release, https://www.janushenderson.com/en-us/advisor/press-releases/global-share-buybacks-surge-to-a-record-1-31-trillion-almost-equalling-dividends/ (last accessed 14 March 2024).

combined dividend yields and share buyback levels, but not consistently—in particular, this result does not hold in the USA. Nonetheless, for the New Zealand market, we observe that the level of dividend yields with or without share buybacks has been consistently higher for the utilities index than for the broad equity market index over the period 2016–23.

We therefore conclude that it is important for the NZCC to be mindful of the investor demand for dividend payments, as the lack of these may disincentivise investors to commit capital into utilities, which is particularly required in the EDBs' context of expected growth to deliver the energy transition in New Zealand. As such, the NZCC should include dividend yield testing as part of its financeability test.

# 4 Impact of cash flow deferral

In relation to the revenue smoothing limit in DPP4, as part of its latest IMs Review Final Decision, the NZCC alludes to the fact that it wishes to manage the volatility of allowable revenues and to avoid mid-period price shocks. The NZCC states:[48]

In making our final decision, we have balanced the importance of enabling suppliers to recover allowable revenues in a timely way, alongside the desirability of managing aggregate volatility in gross allowable revenue and avoiding mid-period price-shocks.

We also note that the NZCC intends to undertake a flexible approach in relation to revenue smoothing limits, especially in the context of financeability, considering the pros and cons of applying those limits:[49]

We [the NZCC] will consider what limit, if any, would be appropriate [...], taking into account any relevant financeability effects of our decision.

However, EDBs expect to experience an upward pressure on their revenue allowances in DPP4 due to the increased expenditure requirements, as well as the interest rate and inflationary environment, unless the NZCC smoothens the effect. In this context, given its considerations as part of IMs Review Final Decision as outlined above, the NZCC may consider deferring cash flows, including deferrals beyond the DPP4 period.

In this section, we explain that formulating policies of cash flow deferral, especially for deferrals of the cash flows corresponding to the DPP4 allowed revenue beyond DPP4, necessitates analysis of the extent and duration of such deferrals, and importantly their impact on networks and risks they are exposed to. Indeed, revenue deferral, especially if done at the DPP reset, can substantially increase the perceived risk of investment recovery, prompting investors to seek higher returns. Cash flow deferrals can also potentially affect investments if networks then choose to defer their investments, which has the potential to, in turn, harm consumers in the long term.

[48] NZCC (2023), 'Financing and incentivising efficient expenditure during the energy transition topic paper. Part 4 Input Methodologies Review 2023 – Final decision', 13 December, p. 352, para. D44, https://comcom.govt.nz/__data/assets/pdf_file/0023/337613/Part-4-IM-Review-2023-Final-decision-Risks-and-Incentives-topic-paper-13-December-2023.pdf (last accessed 14 March 2024).
[49] Ibid., para. 4.20.

We start this section by highlighting that revenue deferrals are not common regulatory practice (section 4.1) We then turn our focus to the potential regulatory-risk (section 4.2) and term-premium effects (section 4.3), both of which may stem from the additional risks created by cash flow deferrals, and could warrant additional compensation being required by investors.

### 4.1 Regulatory precedents on cash flow deferrals and revenue smoothing limits

An analysis of European regulatory precedents shows that revenue deferrals are not common regulatory practice, and that they have been used in some jurisdictions and sectors only under very specific circumstances.

For instance, in Northern Ireland, during the development of the Northern Irish gas network, a 'profile adjustment' was introduced to defer revenue to protect early customers from significant levels of bills associated with the initial roll-out. Indeed, revenues and tariffs of gas distribution networks (GDNs) are determined using a Pi model which considers consumption estimates over a longer 'revenue recovery period' which goes beyond the current regulatory period. This results in a smoothing of tariffs for customers and deferred revenues for GDNs.[50] This way, revenues have indeed been deferred beyond the regulatory period, but this has been done in a greenfield context—because the network(s) were under development and the customer base was expected to expand.[51]

The airport regulatory regime in France also mandates only moderate yearly tariff increases.[52] However, this smoothing has been criticised by the French airports union (Union des Aéroports Français or UAF), as, according to the UAF, it introduces an 'artificial constraint' on the implementation of economic regulation.[53]

Accordingly, good regulatory practice suggests that cash flow deferrals only happen under very specific circumstances where these deferrals are planned ex ante, and the means by which the deferrals are effected

[50] Utility Regulator (2022), 'GD23 - Gas Distribution Price Control 2023-2028 – Draft Determination Annex C', March, p. 2, https://www.uregni.gov.uk/files/uregni/documents/2022-03/annex-c-connections-and-volumes.pdf (last accessed 12 March 2024).
[51] See also Competition Commission (2012), 'A reference under Article 15 of the Gas (Northern Ireland) Order 1996, Phoenix Natural Gas Limited price determination', November, Section 2, https://assets.publishing.service.gov.uk/media/551948b8e5274a142b000186/phoenix_natural_gas_limited_price_determination.pdf (last accessed 13 March 2024).
[52] Aeroports de Paris (2015), '2016-2020 Economic Regulation Agreement', p. 54.
[53] L'Union des Aéroports Français & Francophones Associés (2022), 'Rapport d'activité', p. 19.

are known by investors—such that any implications for risk of cash flow recovery can be understood and priced, as needed, by investors. Otherwise, network controls generally allow the network to price up to the revenue corresponding to the estimates based on the regulatory building blocks.[54] Failure to do so may imply a shortfall between the allowed revenues and required cash flows within the regulatory period—the purpose of the financeability testing is to avoid such a shortfall. In other words, a reasoned, principles-based, ex ante mechanism to defer revenue recovery needs to be developed and assessed for its impact before any deferral is introduced.

Moreover, in the case of Phoenix Natural Gas Limited (PNGL), a gas distribution network in Northern Ireland, the Competition Commission's final report on price determination for PNGL in 2012 acknowledges the potential need for a higher return allowance to stimulate investments in a regulated company with deferred revenues.[55] This highlights the effect of cash flow deferrals on investors' perceived risk of investment recovery, and its potential to have a negative impact on the continued investments that are needed for the future development of the network(s).

### 4.2 Regulatory risk

Deferring cash flows to future regulatory periods also increases the perception of regulatory risk. Indeed, the essence of the time-inconsistency issue in the regulation of long-lived network assets is that regulators cannot offer binding commitments that their successors will honour in full any pledges that they make today regarding expected future returns. This translates into uncertainties in terms of:

1. the future regulator's actions, given the current regulatory framework;
2. whether the current regulatory framework will resist political pressure;
3. the way that future regulators will address events that are not covered by the regulatory framework.[56]

[54] The building blocks approach is a common regulatory design framework used by the NZCC and other regulators internationally, which calculates allowed revenue based on the underlying components (i.e. building blocks) such as OPEX, regulatory depreciation and return on capital. These components reflect the cost of running an efficient regulated business.
[55] Competition Commission (2012), 'Phoenix Natural Gas Limited price determination', 28 November, p. 11.
[56] In theory, rules and contractual commitments could be created to remove these sources of uncertainty. In practice however, this is unlikely, as neither the regulators nor the government would

For example, the NZCC changed its methodologies for assessing allowed revenues in the IMs Reviews. In its latest IMs Review, it changed the WACC percentile for Gas Pipeline Businesses from the 67th to the 50th, which in the previous IMs Review was changed from the 75th to the 67th percentile.[57] This is effectively a change in methodology, rather than being driven by an update in capital markets data; for this reason, arguably, it could not have been anticipated by investors in advance.

Even if such regulatory uncertainties, and thus risks, are not specifically priced within the capital asset pricing model (CAPM) model, which informs the rate of return allowance, and are, on the face of it, not identifiable within the NZCC's NPV-neutrality tests, they are still expected to have an impact on the probability-adjusted cash flow expectations, and hence on the value of the regulated company. It would thus be necessary to include an allowance for this effect in the determination of allowed revenue.

Moreover, the inter-temporal CAPM (ICAPM) developed by Brennan and Xia (2006) (the 'BX framework') shows that investors price risks that are not captured by the CAPM.[58] As such, if the exposure of future cash flows to regulatory risk is priced by investors, those investors will require a higher return for investing in regulated networks. The BX framework provides a means to think about the impact of regulatory risk on asset pricing. The implication is that an increase in the regulatory risk suggests an increase in the cost of capital as a result of the deferral of the cash flows for regulated utilities.

Finally, this regulatory risk is arguably asymmetric—while there is a chance the successor of the current regulator will find cash deferrals unrecoverable, the chance that it will find cash deferrals insufficient and will provide additional revenues is, a priori, lower. As a risk priced into the cost of capital, any negatively asymmetric risk also requires an uplift to the return allowance, to keep the probability-adjusted cash

want to bind itself to commitments that it might later be compelled to renege on. Furthermore, given the broad and complex remit of economic regulators, it is a considerable challenge to construct a complete 'regulatory contract' between companies and the regulator that specifies in advance the course of action in every possible state of the world.

[57] NZCC (2023), 'Cost of capital topic paper. Part 4 Input Methodologies Review 2023 – Final decision', 13 December, paras 6.2.1, 6.13 and 6.17, https://comcom.govt.nz/__data/assets/pdf_file/0022/337612/Part-4-IM-Review-2023-Final-decision-Cost-of-capital-topic-paper-13-December-2023.pdf (last accessed 14 March 2024).

[58] The ICAPM can be considered as an extension of the CAPM to a multi-period setting where certain assumptions of the CAPM are relaxed. See Brennan, M. and Xia, Y. (2006), 'Risk and Valuation under an Intertemporal Capital Asset Pricing Model', *Journal of Business*, **79**:1.

flow expectations, and hence the value of the company, of the regulated utility, unchanged.

### 4.3 Term-premium effect

Finally, deferring cash flows also creates a term-premium effect, as the NPV of a longer-duration stream of cash flows is more sensitive to changes in interest rates. This is due to the fact that compounding of the annual interest rate for more distant cash flows will also compound the changes in the interest rate that may happen during the term of the cash-flow stream. The interest rate risk is systematic as it relates to the macroeconomic environment, and risk-averse investors require a premium for that risk. Such a premium applies even for a stream of cash flows with initially low exposure to systematic risk, such as a utility cash-flow stream. Indeed, in the limiting case of a risk-free bond, the premium for a longer term would still apply. This is the term premium that leads to an upward-sloping yield curve in theories of the term structure of interest rates.

For New Zealand, a proxy for the slope of the yield curve can be based on historical long-term data on the arithmetic average of the difference in realised returns on long-maturity government bonds compared with short-maturity bonds. Over the period 1900–2022, this gives an estimate of 0.7% for the term premium.[59] For long-maturity government bonds, we used the realised returns which are based on government bonds with typical average maturities of ten or more years,[60] while for short-maturity bonds, the realised returns are based on the yields on three-month treasury bills since 1978 and on similar short-term maturity notes before that.[61]

[59] The returns for New Zealand long-term bonds and short-term bills between 1900 and 2022 are sourced from Dimson, E., Marsh, P. and Staunton, M. (2022), 'Credit Suisse Global Investment Returns Yearbook 2022'. It is important to note that this indicative estimate of the term-premium effect does not disaggregate the difference in yields on long- and short-term bonds into various drivers including the expected path of short-term interest rates, behavioural factors (i.e. demand and supply of long- and short-term bonds), and liquidity preferences. For a discussion of what drives the term premium, see BIS (2018), 'Term premia: models and some stylised facts', 23 September.

[60] Bond returns are based on the prices of New Zealand government securities traded in London for the period 1900–1930, followed by the period 1931–1984 by those based on yields on government bonds with a typical average maturity of ten years. From 1985, the Reserve Bank of New Zealand ten-year government bond yield and coupons have been used to produce a bond total return index. From 1999 to 2022, the JP Morgan index of New Zealand government bonds with ten or more years to maturity has been used. See Dimson, E., Marsh, P. and Staunton, M. (2020), 'Credit Suisse Global Investment Returns Yearbook 2020', p. 165.

[61] For the period 1900–1930, the short-term interest rate is taken as the return on UK treasury bills, followed by the central bank deposit rate from 1931 to 1954, the yield on the shortest-maturity government notes from 1955 to 1977, and the yield on three-month treasury bills from 1978 until 2022. See Dimson, E., Marsh, P. and Staunton, M. (2020), 'Credit Suisse Global Investment Returns Yearbook 2020', p. 165.

Notably, the NZCC itself currently allows for a term credit spread differential (TCSD) within the cost of debt allowance, which reflects that a required return would tend to be higher for a longer-term investment.[62]

### 4.4 Conclusions on the impact of cash flow deferral

To summarise, in its latest IMs Review Final Decision, the NZCC has stated that it wishes to manage the volatility of allowable revenues and to avoid mid-period price shocks, which may lead the NZCC to deferring cash flows beyond the DPP under consideration.

However, good regulatory practice, as supported by international practice, involves setting a control where the network can price up to the revenue corresponding to the estimates based on the regulatory building blocks and suggests that cash flow deferrals only happen under very specific circumstances. This implies that a reasoned, principles-based, ex ante mechanism to defer revenue recovery would need to be developed and assessed for its impact before any deferral is introduced.

Moreover, the introduction of cash flow deferral introduces or increases at least two types of risks:

- a regulatory risk, as regulators cannot offer binding commitments that their successors will honour in full any pledges that they make today regarding expected future returns;
- a systematic interest rate risk, as the NPV of a longer-duration stream of cash flows is more sensitive to changes in interest rates than that for shorter-duration streams.

Therefore, if such deferrals are introduced, it would be necessary to include allowances for these additional risks in the determination of the allowed revenue.

[62] NZCC (2023), 'Part 4 Input Methodologies Review 2023 – Final decision. Cost of capital topic paper', 13 December, para. 3.9, https://comcom.govt.nz/__data/assets/pdf_file/0022/337612/Part-4-IM-Review-2023-Final-decision-Cost-of-capital-topic-paper-13-December-2023.pdf (last accessed 12 March 2024).

# 5 Consultation response

In addition to the aspects of the financeability analysis discussed in sections above, in this section, we comment on some specifications of the financeability analysis and principles that the NZCC has outlined in its consultation. We start from going through the NZCC approach overall (section 5.1). Then, we move on to a specific point about the consequences of supplier failures that we suggest the NZCC should be mindful of (section 5.2). Finally, we comment on the regulatory tools that the NZCC considers using as potential financeability remedies in its consultation (section 5.3).

## 5.1 The NZCC's approach to financeability testing

While acknowledging **the need for the financeability 'sense check'** and mentioning the intention to assess credit metrics, the NZCC appears to place a lot of emphasis throughout the consultation on the sufficiency of the cost of capital allowance to incentivise investors to invest. Below, we highlight that this may not be the case, by commenting on a few statements by the NZCC.

First, specifically about the cost of capital allowance, the NZCC states that:[63]

[…] the regulatory return offered though the weighted-average cost of capital (WACC) is sufficient to attract such investment.

This statement is true only if companies are able to raise financing on the terms assumed by the regulator when setting cost of capital allowances. Also, we observe that factors other than the level of the allowed WACC can play a role in determining whether a price control package is financeable. As an example, in the UK, the CMA states that while WACC is the determining factor, it recognises the importance of many other factors and elements of the assessment:[64]

Our starting point is that the WACC is the primary factor in the redetermination ensuring that an efficient firm can finance its functions. […] However, in addition to considering the level of the WACC**, we also**

[63] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 1.13.
[64] CMA (2021), 'Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations. Final report', 17 March, para. 10.73, https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_---_web_version_-_CMA.pdf (last accessed 14 March 2024).

**consider a number of other factors in making our assessment in the round, including other factors that influence the overall balance of risks and reward within the price control**. [emphasis added]

Ofgem explicitly disagrees with the premise that the WACC is the only relevant consideration for the financeability assessment. Ofgem states:[65]

[…] **we disagree that the WACC assumptions are the only relevant considerations** for determining whether the price control in the round is consistent with the credit rating assumed. In our view, all other policy decisions that influence revenue and cashflow are relevant to an in-the-round assessment of whether the price control assumptions are consistent with the credit rating assumed.

Second, we note that the NZCC says the following:[66]

In cases of well-developed networks operating in a relative steady-state (such that depreciation allowances are relatively closely matched to reinvestment requirements) entities with appropriate capital structures can maintain adequate credit ratings and can sustain investment in their networks.

This will, however, not be the case if the level or timing of revenue allowances is such that networks are unable to finance their operations and investment on the same terms as assumed when setting those allowances. The extent to which a network can be assumed to be in a 'steady-state' in each period is also a matter for empirical analysis, as part of the financeability testing. Financeability issues can arise where the timing of cash outflows is mismatched with the timing of cash inflows for various reasons—including the timing of CAPEX requirements and regulatory choices around the timing of cash flows, such as how wash-up or other NPV-neutral mechanisms operate. Indeed, the NZCC acknowledges both of these reasons for potential financeability issues in the consultation.[67]

Furthermore, we have concerns about the level of detail that has been specified by the NZCC in relation to its planned approach to

[65] Ofgem (2021), 'Water Determinations 2020: Cost of Capital Working Papers', 26 January, para. 36, https://assets.publishing.service.gov.uk/media/601a80acd3bf7f70b95eea2a/Ofgem_response_to_CMA_Cost_of_Capital_Working_Papers_260121_Redacted.pdf (last accessed 14 March 2024).
[66] Ibid., para. 1.10.
[67] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, paras 1.14 and 3.13.

financeability, and whether this will provide a sufficient basis for an informed engagement with the industry at DPP resets in relation to robustly assessing the financeability of the DPP package. We note that the NZCC's approach to testing financeability broadly follows our recommendation from the previous submission, which consists of three steps:[68]

- to define the target credit rating;
- to define the metrics to be measured and thresholds against which to benchmark them;
- to propose a remedy if a financeability concern arises.

In line with the recommendation, firstly, the NZCC mentions BBB+ as a **benchmark credit rating**.[69] We consider that this is an appropriate approach. This credit rating would be consistent with the credit rating the NZCC uses to set the cost of debt allowance,[70] which is an internally consistent way of setting the benchmark. Put differently, if the NZCC set the benchmark at any rating below BBB+, its cost of debt allowance would be insufficient to cover the operators' costs of debt financing.

Secondly, as for the **metrics**, the NZCC says that it will:[71]

[…] include financeability metrics and ratios, drawing on the approach of regulators in other jurisdictions, and credit rating agencies […]

We note a concern as regards this point that the NZCC does not appear to intend to commit to a certain list of metrics or their thresholds. This would provide the NZCC with flexibility to undertake the assessment in the round and account for the context, but it also (i) creates uncertainty about the robustness of the approach that the NZCC will take and hence increases regulatory risk; (ii) provides the NZCC flexibility to adjust the approach to fit the results.

For example, in DPP3, the NZCC focused on assessing free cash flows (checking whether those were positive or negative) and interest cover ratio (comparing it with a very low threshold of 1.0x).[72] We previously

[68] Oxera (2023), 'Review of the NZCC's approach to the financeability assessment', 15 September, section 4.2.
[69] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 4.10.
[70] NZCC (2023), 'Part 4 IM Review Final decision. Cost of capital topic paper', 13 December, para. 3.11, https://comcom.govt.nz/__data/assets/pdf_file/0022/337612/Part-4-IM-Review-2023-Final-decision-Cost-of-capital-topic-paper-13-December-2023.pdf (last accessed 11 March 2024).
[71] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 3.8.
[72] Oxera (2023), 'Review of the NZCC's approach to the financeability assessment', 15 September, section 3.

expressed our concerns about the robustness of this analysis.[73] At the same time, this analysis would be arguably compliant (even though quite broadly) with the NZCC's commitment to 'draw on' approaches of other regulators and credit rating agencies insofar as the interest coverage ratio and free cash flows are examined in other regimes, but without such low thresholds. Having certainty about the NZCC's approach to financeability testing is likely to be important to investors financing networks' operations and capital investments, as it would provide them confidence that the NZCC's financeability testing will be effective. This would help the NZCC avoid unintentionally creating disincentives to invest which would be against the Part 4 purpose.

The third point that follows from this is that in addition to specifying metrics, we find it essential for the NZCC to work with some **thresholds** for those metrics, which the NZCC currently does not intend to do.[74] Otherwise, it is unclear how the NZCC will interpret the ratios it calculates.

Indeed, we observe that an interest cover ratio of 1.0x, as used by NZCC in DPP3, implies that all of the operating profit of a company would be absorbed in meeting its interest expense. This does not appear, a priori, sustainable over time, nor is it consistent with an investment-grade credit rating, For example, under Moody's credit rating methodology, the FFO interest coverage ratio (defined similarly to the ratio used by the NZCC) of below 1.0x is rated Caa.[75] (The Caa rating corresponds to 'speculative of poor standing' and 'very high credit risk'.) It also seems inconsistent with the basis of a regulated WACC allowance—which includes the allowance for a return to equity—if all the operating profit is projected to be used for meeting interest expenses.

Finally, to determine whether any **remedies** are required, the NZCC is planning to undertake the analysis for a **notional company** (also referred to by the NZCC as 'prudent and efficient supplier'), and if the financeability issue is identified for the notional company, confirm whether the issue also exists for the **actual company** (also referred to by the NZCC as 'the particular supplier').[76] Only if the actual company

[73] Oxera (2023), 'Review of the NZCC's approach to the financeability assessment', 15 September, section 4.1.
[74] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 3.9.
[75] Even allowing for some differences in the definitions of ratios, the 1.0x threshold is too low to assess that a utility network is financeable. See Moody's (2022), 'Rating Methodology: Regulated Electric and Gas Networks', 13 April, p. 8 and Oxera (2023), 'Review of the NZCC's approach to the financeability assessment', 15 September for further details on the definitions of the ratios.
[76] Ibid., paras X11–13, 3.6. It is unclear from the consultation whether the NZCC intends to consider the actual company including or excluding the non-regulated parts of the actual businesses.

experiences challenges, the NZCC intends to act on its findings. We also note that the NZCC has not defined its assumptions for the notional company (i.e. the prudent and efficient), which creates a further challenge for investors in engaging with the NZCC in robustly assessing whether the price control is financeable.

We agree that the NZCC needs to be mindful of the financeability of the actual company, as it is the actual company that in reality delivers the service to consumers. We further discuss how important it is that the actual company maintains its financial resilience and provides an uninterrupted service in the next sub-section. However, we disagree with the NZCC that it can disregard notional company financeability issues if the actual company does not experience them, as we explain below.

We consider that regulatory allowances need to be workable for the notional (i.e. the efficient and prudent) supplier, and ensuring this would be consistent with the Part 4 purpose to incentivise (and avoid disincentives to) investment. Otherwise, investor confidence in the regime may be undermined and/or financing on reasonable terms may be at risk.

For example, if an actual network achieves superior efficiency, and therefore, has a healthy headroom before financeability issues would arise, it should be able to benefit from its efficiency in full, without the benefit being negatively affected by the structure of the regulatory regime. However, if the notional financeability is strained, the benefit that the actual company is able to receive from its superior efficiency may be reduced. For example, the credit rating that it is able to achieve may be lower than the network(s) would be able to achieve without notional financeability issues, hence putting upward pressure on the cost of debt financing.

Another way of illustrating this principle is with reference to dividend yields. While, as the NZCC points out,[77] actual companies decide on the level of dividend payments without any regulatory involvement, we consider that the regulator needs to ensure that the notional company, i.e. the efficient and prudent supplier, is in theory able to pay a sufficient dividend to its shareholders to keep their equity capital investment attractive.

[77] Ibid., para. 2.8.

Therefore, while we agree that testing financeability of the actual company is important, we do not find it appropriate to not remedy notional financeability issues.

To complement this discussion about the notional company test, in the next sub-section, we outline our concerns with the NZCC's view that suppliers can (costlessly) leave the market, should they be unwilling to 'rearrange their circumstances'.[78]

### 5.2 Impact of supplier failure

In the consultation, the NZCC argues that if a given supplier cannot finance the necessary investment or meet dividend requirements of its shareholders they should either rearrange their circumstances or leave the market.[79] However, in this sub-section, we discuss that ensuring that suppliers are able to raise capital and finance their investment is not purely an issue of an individual supplier. We agree with the NZCC that the goal of a comprehensive financeability regime is not to ensure the level of returns to all suppliers regardless of their decisions. However, good regulatory practice should seek to ensure that the industry as a whole remains resilient and attractive for investors, creating sufficient innovation and investment incentives, and not disincentivising investment, consistent with the Part 4 purpose.

A supplier exit or a supplier failure, which the NZCC welcomes if it is a consequence of a particular supplier's actions,[80] may lead to significant costs to consumers and the government. The direct costs may be in the form of higher bills and worsening quality of services. There are also indirect costs, such as a falling level of confidence in the industry leading to potential difficulties in attracting sufficient capital. The falling level of confidence may also lead to an increase in the return rates required by investors (which ultimately would need to be passed on to consumers via cost of capital revenue allowance).

The NZCC suggests that a supplier could sell the assets to another owner if the ability to finance expenditure is compromised.[81] However, the supplier may struggle to find alternative investors for the business. A lack of orderly transition in ownership may place undue pressure on the quality of service, due to management distractions and lack of funding allocated to improving the quality, and lead to significant costs in the form of administration and transaction fees, which are likely to be

[78] Ibid., para. 2.10.
[79] Ibid., para. 2.10.
[80] Ibid para. 2.10
[81] Ibid., para. 1.12.

higher than in a regular change of ownership. These would tend to lead to direct costs to consumers.

The high costs of supplier failure can be illustrated by the multiple retail energy supplier failures in Great Britain from 2021 to 2023. Over the period, over 30 retail energy suppliers were pushed into insolvency—those suppliers served more than 10% of all consumers.[82] To ensure continuity of supply, the companies were unwound either through a Supplier of Last Resort process, in which the customer book of the failed supplier is acquired by or assigned to another company, or through a Special Administration regime, as in the case of Bulb Energy, which was considered too big to be unwound through the Supplier of Last Resort process. According to Ofgem, these supplier failures have had high direct costs to consumers: £2.35bn to fund the Supplier of Last Resort process and £246m expected to result from the Bulb Special Administration.[83]

While a large proportion of these costs were driven by wholesale energy prices (in addition to direct administrative and legal costs), which are not directly analogous or applicable to the case of EDBs, the costs highlight an important precedent—despite holding a competitive process in which existing suppliers could acquire the customer book of a failed supplier, a significant proportion of costs (which had led to the supplier failure in the first place) had to be socialised. Furthermore, these estimates do not account for a potential impact on the quality of service which could come on top.

Apart from the considerable direct costs, the process has created uncertainties about the possible market impact, including court cases brought by market participants over alleged distortions of competition.[84]

Such failures may also undermine investor confidence in the industry. For example, Thames Water, a water network supplying services in London, is currently going through financial difficulties. While there are

[82] Oxera (2022), 'Review of Ofgem's regulation of the energy supply market', 3 May, p. 2, https://www.ofgem.gov.uk/sites/default/files/2022-05/Review%20of%20Ofgems%20regulation%20of%20the%20energy%20supply%20market_May%202022.pdf (last accessed 6 Match 2024).
[83] Ofgem (2024), 'SoLR Levy Offset consultation', 9 February, p. 6, https://www.ofgem.gov.uk/sites/default/files/2024-02/Ofgem%20SoLR%20Levy%20Offset%20Consultation%20February%202024%20V2.pdf (last accessed 6 Match 2024).
[84] Reuters (2023), 'British Gas, E.ON can appeal over sale of failed UK energy supplier Bulb, court rules' 19 December, https://www.reuters.com/business/energy/british-gas-eon-can-appeal-over-sale-failed-uk-energy-supplier-bulb-court-rules-2023-12-19/ (last accessed 6 Match 2024).

no ongoing discussions about the possibility of other water companies going into insolvency, and the regulator maintains that the sector remains attractive,[85] concerns about the attractiveness of the industry to investors are being raised by stakeholders:[86]

Conservative ministers maintain that concerns about the financial resilience of water companies [...] could create a "risk premium" for investing in UK infrastructure.

John Reynolds, chief executive of Castle Water, which provides water and sewage services to business customers in London and the south-east, warned that Thames Water's troubles were likely to deter overseas investors.

On balance, ensuring that the regime is financeable and resilient does not imply that the NZCC should reward companies that have made poor decisions. Rather, considering the high direct and indirect costs of suppliers leaving the industry, it would be appropriate for the NZCC to try to prevent such instances. Robust testing of financeability on a notional and actual bases to plausible downside scenarios could assist the NZCC.

## 5.3 Financeability remedies assessment

As part of our response to the NZCC's consultation, in this sub-section, we share our considerations on each of the potential regulatory levers that may affect financeability (and thereby potentially be used to remedy any financeability concerns, if identified), as outlined by the NZCC. We assess these, in turn, below.

### 5.3.1 Alternative X-factors

Alternative X-factors can be used to change the profile of cash flows over the regulatory period. Hence, X-factors can both improve as well as worsen financeability. If an X-factor adjustment is used to introduce a form of first-year deferral of revenue—to limit revenue increases between regulatory periods—leading to cash deferrals beyond DPP4, financeability issues can arise. Likewise, an X-factor adjustment can be used to increase cash flows in years where a financeability issue is

[85] Ofwat (2023), 'Statement on financial resilience in the water sector', 29 June, https://www.ofwat.gov.uk/statement-on-financial-resilience-in-the-water-sector/ (last accessed 10 March 2024).
[86] Financial Times (2023), 'Thames Water crisis could hit UK investment, ministers warn', 2 July, https://www.ft.com/content/24d49c0a-3abe-4b87-abf5-d0684bee87be (last accessed 10 March 2024).

otherwise identified, while maintaining NPV-neutrality over the regulatory period.

### 5.3.2 Setting the revenue smoothing limits in nominal or real terms

While we note that any moves towards a nominal basis of revenue setting (e.g. a nominal WACC allowance combined with non-indexation of the RAB) can be a means of accelerating cash flows in an NPV-neutral way if appropriately estimated, we agree with the NZCC's view that it is reasonable to specify revenue smoothing limits for EDBs in real terms.[87] This is because specifying the limit in nominal terms would introduce additional inflation risk into the regime that would be difficult (or costly) for companies to hedge.

### 5.3.3 The reference revenue against which the limit is specified

We agree with the NZCC that the purpose of the revenue smoothing mechanism is to limit the volatility of bills paid by consumers, hence, setting the cap in reference to the actual revenues charged to consumers (rather than the maximum revenue that the supplier is allowed to set) may be a reasonable option. However, such a cap needs to be set with consideration of its effects on financeability and potential cash flow deferral beyond the regulatory period, as discussed in the previous sections.

### 5.3.4 Growth adjustments

We agree that adjusting the revenue cap for growth is in principle consistent with promoting price stability for consumers. If the number of consumers or the quantities consumed is increasing, such an adjustment allows for the revenues to be increased without increasing per unit prices in individual consumers' bills. Aurora energy in its submission has outlined a potential approach to estimate volumes for the adjustment in the same units in which the charges are set, which in this case is the kWh delivered.[88] Practically, a network growth factor could be calculated based on the actual data and updated periodically, or based on an industry-wide forecast. As for any other instruments, the feasibility of the implementation for any such adjustment should be considered, as well as whether any unintended consequences are likely to follow.

[87] NZCC (2024), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 4.26.
[88] Aurora Energy (2023), 'Aurora Energy's submission on Default price-quality paths for electricity distribution businesses from 1 April 2025 Issues paper', 19 December, para. 72, https://comcom.govt.nz/__data/assets/pdf_file/0035/339758/Aurora-Energy-DPP4-Issues-paper-submission-19-December-2023.pdf (last accessed 11 March 2024).

### 5.3.5 Equity issuance costs

If the planned investment programme within the DPP requires an equity injection, we consider it appropriate for the NZCC to provide an allowance to cover the cost associated with it, given that an efficiently operated network is likely to have to incur it. In the consultation, the NZCC indicates that it could consider providing an allowance for the new equity issuance as a part of a DPP where a supplier intends to issue new equity.[89] There is a benefit in defining the allowance upfront, to reduce uncertainty and promote investor confidence, especially given that an option of a pass-through, if considered, will also require estimates because some of the costs of equity issuance are indirect.

There are international regulatory precedents for including an equity issuance costs allowance within the regulatory regime. For example, in the ongoing price control period, Ofgem provides a separate allowance of 5% on the amount of new equity that networks may require.[90] The allowance is meant to cover both direct and indirect costs of issuing new equity. The direct costs can include underwriting, consultancy/legal/advisory, and communication fees. The indirect costs relate to the under-pricing of the issue relative to the traded share price, disclosure of proprietary information, loss of control, etc.

In fact, we have seen that recent market and academic evidence supports a higher transaction cost allowance (than the 5% allowed by Ofgem),[91] such that it will be important to undertake further analysis on both the direct and indirect costs of equity issuance as part of the DPP4 financeability testing. This is especially the case where CAPEX in EDBs' business plans is high, and/or any prospective changes in policy reduce upfront funding of connections growth via customer contributions.[92] Such scenarios are likely to imply that new equity injections (and

[89] NZCC (2023), 'DPP4 reset – Financeability of electricity distribution services in the default price-quality path', 22 February, para. 4.40.
[90] Ofgem (2022), 'RIIO-ED2 Final Determinations. Finance Annex', 30 November, para. 10.82, https://www.ofgem.gov.uk/sites/default/files/2022-11/RIIO-ED2%20Final%20Determinations%20Finance%20Annex.pdf (last accessed 12 March 2024).
[91] For example, Brealey et al. found that underwriting fees typically range 3–6%; see: Brealey, R., Myers, S., Allen, F. and Edmans, A. (2022), *Principles of Corporate Finance*, 14th edition, McGraw-Hill Education, pp. 409 and 418; Levis et al. show 7.11% average direct expenses for secondary equity offerings in the UK; see: Levis, M., Meoli, M. and Migliorati, K. (2014), 'The rise of UK Seasoned Equity Offerings (SEOs) fees during the financial crisis: The role of institutional shareholders and underwriters', *Journal of Banking & Finance*, November, 48, pp. 13–28.
[92] We note, for example, that potential changes in policy are being considered by the Electricity Authority, relating to the extent to which customers pay upfront for new connections. See Electricity Authority (2023), 'Targeted Reform of Distribution Pricing', 5 July, para. 7.30, https://www.ea.govt.nz/documents/3367/Issues_Paper_-_Target_reform_of_Distribution_Pricing.pdf (last accessed 12 March 2024).

thereby direct and indirect costs of issuance) would be required by EDBs—especially if dividend yields are retained at a reasonable level.

### 5.3.6 Asset life adjustments

The NZCC acknowledges in the consultation that the asset life adjustment factors can affect financeability. Indeed, through shortening asset lives, that the NZCC considers, cash flows are accelerated, which may address a financeability issue in the short term. Shortening asset lives is an effective tool when industries face concerns about potential asset stranding, as it allows the RAB to be depreciated before stranding risks materialise or a smaller proportion of RAB to be at risk of stranding. However, the asset life shortening may not be the most appropriate financeability remedy when it introduces a disconnect between the technical and regulatory asset lives. Over time, this may lead to a situation in which the RAB is not reflective of the revenue generating assets owned and operated by the business. The EDBs do not foresee a major risk of asset stranding, and instead, expect the network to expand, requiring cash flows in the future. Therefore, the NZCC should be mindful of the long-term implications of any potential measures in relation to the shortening of the asset lives.

## 5.4 The consultation response conclusions

In conclusion, in addition to the points we have made throughout the report, we note the following, directly responsive to the statements the NZCC made in its consultation.

- Estimating an appropriate cost of capital allowance bottom-up may not be sufficient to incentivise investors to invest—a financeability test is required to see if the network is able to raise financing on the terms assumed by the regulator when setting cost of capital allowances. The NZCC generally does acknowledge that the test is needed.
- The financeability test is needed even for networks in the 'steady-state', because even in those cases, the circumstances may be such that financeability issues arise.
- We consider that the NZCC's choice of the BBB+ credit rating as a benchmark is appropriate, as it is consistent with the credit rating that the NZCC used for setting its cost of debt allowance.
- We have concerns about the level of detail that has been specified by the NZCC in relation to its planned approach to financeability. This approach creates uncertainty about the robustness of the NZCC's analysis that it will undertake and provides the NZCC flexibility to adjust the analysis to fit the results.

- We also find it essential for the NZCC to work with some thresholds for financeability metrics, which the NZCC currently does not intend to do. Otherwise, it is unclear how the NZCC will interpret the ratios it calculates. We also consider that the thresholds that the NZCC (implicitly) used in DPP3 (i.e. free cash flow of above 0 and the interest coverage ratio of above 1.0x) were too low, with reference to maintaining investment grade credit ratings and equity investability in a sustainable industry.
- We consider that the regulatory allowances need to be workable in terms of financeability on the basis of both notional and actual definitions of the supplier.
- We consider it important for the NZCC to define the notional company and let stakeholders comment on the definition.
- Finally, given high direct and indirect costs of suppliers leaving the industry, it would be appropriate for the NZCC to try to prevent such instances. Robust testing of financeability on a notional and actual bases to plausible downside scenarios could assist the NZCC.

We have also commented on the regulatory levers that the NZCC considers to have an impact on financeability and intends to use as potential remedies. We note, in particular, that given the role that equity injections could play as part of the financing of the energy transition and the (significant) future investment needs of the EDBs, it is important to specify the direct and indirect costs of equity issuance for which cost allowances should be made, in DPP4 and beyond. Further evidence can be provided in relation to this, based on market evidence and academic research.

# 6 Conclusion

To summarise, by the assessed issue, we have concluded the following in this report.

- **Investability**. Investability is a concept complementing financeability with the enhanced emphasis on encompassing equity capital, long-term considerations and networks' attractiveness to new investors, which could be particularly relevant for the NZCC and EDBs in the context of the Part 4 purpose to incentivise networks to invest, and the significant investment needs expected in the context of the energy transition.
- **Importance of dividend payments for utilities.** We show that dividend payments are important for utility investors, and that reducing or limiting dividends may disincentivise the commitment of capital.
- **Impact of cash deferrals**. We highlight that cash flow deferrals are used in regulatory practice only in a targeted way, and require a careful assessment of the consequences. Deferrals may also increase the regulatory and interest-rate risk. Therefore, it would be consistent with good regulatory practice for the NZCC to avoid deferring cash flows beyond the DPP period.
- **Further responses to the consultation**. Finally, we provide a few direct responses to the NZCC's financeability consultation. We cover topics such as the structure of the NZCC's intended financeability assessment, the principles that the NZCC intends to follow, and the regulatory levers that the NZCC considers as potential financeability remedies.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